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Risking innovation

Citation for published version:

Osborne, S, Brandsen, T, Mele, V, Nemec, J & Flemig, S-S 2019, 'Risking innovation: Understanding risk and public service innovation - evidence from a four nation study', *Public Money & Management*.
<https://doi.org/10.1080/09540962.2019.1621051>

Digital Object Identifier (DOI):

[10.1080/09540962.2019.1621051](https://doi.org/10.1080/09540962.2019.1621051)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Public Money & Management

Publisher Rights Statement:

This is an Accepted Manuscript of an article published by Taylor & Francis in Public Money & Management on 5/6/2019, available online: <https://www.tandfonline.com/doi/full/10.1080/09540962.2019.1621051>.

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Risking Innovation. Understanding risk and public service innovation - evidence from a four nation study

Introduction

Innovation is a risky business¹. Outcomes are uncertain and/or unknown (Van de Ven et al 2008). This is as true for the public as for the private sector (NESTA 2013). In a time of austerity, governments increasingly demand innovation as a route to efficient and effective public service delivery (e.g. DIUS, 2008). However previous research has demonstrated that public policy remains almost silent on the role that risk plays in innovation in public services, and on how best public service managers can engage with it (Osborne & Brown 2013, Flemig et al 2016). This prior work produced useful conceptual clarification on the nature of risk in public service innovation (PSI), but to date there has been no empirical exploration of it. This paper addresses this gap and considers its import for theory and practice.

Indeed, risk in PSI is an important issue for public management. It not only has significant cost and health and safety implications for public services, but is also central to the impact of such PSIs upon the quality and effectiveness of public services themselves. Moreover, a failure to engage with the risks that PSI entails not only endangers their successful

¹ The research that forms the basis of this paper was conducted as Working Package 4 of the European Commission's 'Learning from Innovation in Public Service Environments (LIPSE) FP7 research programme.

implementation but also can lead to resistance from public service users and staff – which can further jeopardise the potential benefits of such PSIs.

The paper is in four parts. The first part explicates a conceptual framework from the existing literature on risk and PSI and part two sets out its methodology. Part three summarises the findings of the research. The final part uses this data to drive forward our understanding of risk and PSI.

The Literature

Innovation is an often elusive topic in public service research. For example, at times it can include both the invention of new knowledge and its application, whilst at other times it is limited to implementation alone; it can refer to processes both within one organisation alone (subjective innovation) and across a service field (objective innovation); and there is an on-going debate as to whether it is solely a disruptive process or if it can be an incremental one also. (Osborne 1998, Osborne & Brown 2011). We define innovation as “the intentional introduction and application ...of ideas, processes, products or procedures, new to the relevant unit of adoption” (West & Farr 1990). Moreover, innovation is differentiated from incremental change because it is “a distinctive category of *discontinuous* change that offers special challenges” (Brown & Osborne, 2013).

There is a substantive innovation studies literature that this study is embedded within (Van de Ven et al 1989, Langley et al 2013), as well as a distinctive risk governance literature (Barsh & Capozzi 2008, Rosa et al 2013). This literature emphasise that risk and innovation

are socially constructed terms (Weick 1995). Consequently, we define risk as the probability that an undesired but previously identified outcome materialises (Tversky & Fox 1995). It thus denotes outcomes that are known and can be addressed (potentially). They can include financial risk (a monetary loss), risk to service users (an adverse reactions to a new medical treatment), and/or reputational risk for public service organisations (PSOs) and others involved in the innovation process (bad press coverage about a new innovative policy) (Brown & Osborne 2013). Uncertainty refers to the residual likelihood that a completely unforeseen outcome occurs as a consequence of the innovation process. Risk governance seeks to minimise the likelihood of such uncertainty (Renn 2008).

Whilst the innovation studies literature emphasises that risk is inherent to innovation, it is under-researched in the PSI literature. Only a handful of studies have focussed on it (Vincent 1996, Hood 2000, Lodge, 2009, Brown & Osborne 2013, Borins 2014). This limited literature was reviewed and evaluated by this research team initially, prior to the commencement of the research component of this study. This review has been reported elsewhere (Flemig et al 2016) and will not be repeated here. This review identified the work of Lodge (2009) and Brown & Osborne (2013), together with that of Renn (2008) in the field of risk governance, as the most significant conceptual developments in the field over the last decade. Consequently, this subsequent work seeks to test out the insights of this work through empirical research.

Flemig et al (2016) highlighted the hegemony of actuarial and/or health and safety approaches to risk in PSI and a consequent emphasis on risk minimisation or management

rather than a more relational risk governance approach – the latter approach developed in the seminal work of Renn (2008). It also noted the limited nature of public policy guidance to public service managers beyond assertions that risk should be ‘fully discussed and understood’ and that PSOs should take a ‘proportionate approach’ to it (DoH 2010).

Lodge (2009, p. 401) argues for risk as a social construct and identifies ‘four world-views’ of it, albeit without a focus on PSI: fatalism (risk is uncontrollable), hierarchy (risk control requires centralisation), individualism (risk requires trial-and-error style learning), and egalitarianism (risk control requires collective decision-making). He associates these with four ‘instruments’ - randomness, oversight, rivalry, and mutuality, respectively. The arising ‘plurality of solutions’ may not clarify for public managers precisely how to address risk in PSI, but Lodge concludes that deliberation about these conflicting world-views and instruments is intrinsically valuable.

Building on Lodge and Renn, and the broader innovation studies, Brown & Osborne (2013) subsequently proposed a holistic conceptual framework for risk governance and PSI (Table I). This was an important development because the limited prior literature had lacked such conceptual clarity and tools to enable its evaluation. The framework integrated the three approaches to risk which Renn (2008) termed technocratic (professional), decisionistic (political), and transparent (stakeholder) governance, together with the three types of innovation previously defined by Osborne (1998) – expansionary (serving a new need), evolutionary (using a new approach) and total (doing both).

Mode of Risk Governance/ Type of Innovation	Risk Minimisation (technocratic)	Risk Analysis (decisionistic)	Risk Negotiation (transparent governance)
Evolutionary	X	X	X
Expansionary		X	X
Total			X

Table I

Brown & Osborne (2013) framework for risk governance and public service innovation

Combining these with Andreeva's (2014) conceptualisation of hard' (technocratic/regulation-driven) and 'soft' risk management (communication-based/relational), Author (2016) argued that soft approaches can often be the most appropriate ways through which to manage risk in PSI. However, caution was urged that soft approaches not only involve the greatest potential benefits from PSI but also the highest potential risk of failure, because of their complexity and diffuseness. Consequently it was argued to be important to build opportunities for learning into PSI processes, to learn from the experience for the future governance of PSIs (Kinder 2010). The utility of these conceptual frameworks was explored further in this present study.

Methodology

Given the lack of empirical data on risk in PSI, the goal of this research was exploratory. The study adopted a qualitative approach that combined documents, exploratory survey data and personal interview within a case study framework.

Over-reliance on personal interviews in such research can lead to reporting bias. However, our triangulation strategy (Denzin 2006) addressed this bias. *Conceptual triangulation* was employed in the initial literature review to evaluate alternative conceptual frameworks and their import for the empirical findings of this study. *Methodological triangulation* was pursued through multiple methods (exploratory survey, case study data and documentary analysis) to ensure no over-reliance on one method and to examine the research themes from these different perspectives. The survey and interview data in particular were compared for areas of inconsistency and complexity. Finally *data triangulation* was employed (across policy sectors/organisational levels, as well as managers/politicians) to ensure that no one perspective dominated and that competing and complementary viewpoints within and across PSOs and policy fields could be captured (Scandura & Williams 2000, Flick 2004).

Case Selection. The study followed a multi-method comparative case-study design (Yin 2013). Two policy areas were identified that contrasted ‘soft’ procedural innovation with ‘hard’, often capital intensive, projects: mental health (‘soft’ innovation) and environmental sustainability (‘hard’ innovation). The research team believed that it was important to explore these elements as part of the understanding of risk in PSI. Four national cases were also chosen to represent differing state – public service configurations: *Italy* as a unitary Mediterranean state with a high degree of legalism and complex ongoing processes of decentralisation; *Netherlands* as a northern European decentralized unitary state, with relatively strong and autonomous local regions; *Slovakia* as a centralised unitary state in eastern Europe with relatively weak local government; and *United Kingdom* (UK) as a western Europe decentralised, quasi-federal state, with comparatively weaker local government structure compared to the other nations in the study².

Research questions and research methods/data sources. The study pursued four research objectives to identify: the current range of approaches to risk in PSI, their key contingencies, their approaches to stakeholder engagement in decision-making on PSI, and the translation mechanisms for these issues into specific risk management and governance approaches. Consequently these research objectives were operationalised into five research questions:

² It is important to note that the UK itself is a difficult and contested concept. It is currently a state composed of 4 national regions – England, Scotland, Wales and Northern Ireland. The majority of domestic policy issues are devolved to the regional governments of these 4 national regions, including health. The research here was conducted in Scotland in the context of NHS Scotland. Scotland is probably the most bifurcated of the 4 national regions with a very strong national government compared to the weaker local government and health service agencies (Keating 2010, Greer 2008)..

- RQ1: *What is the range of approaches to risk in PSI?*
- RQ2: *What are the key contingencies of effective risk governance in PSI?*
- RQ3: *What are the approaches to stakeholder engagement about appropriate levels of risk for PSI?*
- RQ4: *How are these discussions translated subsequently into specific risk management/governance models?*
- RQ5: *What are relevant principles for effective risk governance in PSI?*

An initial exploratory survey was conducted within these cases, entailing 200 invitations in each country (100 for each policy case) – 800 in total. This was intended to scope out the area of investigation and to structure the subsequent qualitative investigations. The survey included a mix of open and closed questions. The questions contained in the survey were for two purposes. First they were intended to explore the understanding of risk and its impact upon PSI held by respondents, by a series of open-ended questions. Second they were intended to interrogate the conceptual framework for this research project developed in Flemig et al (2016) and derived from the work of Lodge (2009) and Brown & Osborne (2013). This framework was embodied in the 5 research questions identified above, each of which formed part of the survey (and the case studies). This was a mixture of open and closed questions, with the latter limited to binary ‘yes – no’ alternatives rather than multi-point Likert Scales.

The survey was directed to managers with responsibility for direct service provision within each PSO and policymakers (local and/or national politicians). In each country, 4 research

sites (public service organisations [PSO]) were identified. The survey was administered within the four policy fields identified with the active support, and encouragement of participation, from senior managers/politicians in each PSO, to enable a strong response rate. This approach yielded 657 useable responses (82%) - derived from a mixture of interviews (in-person and by phone), postal and online survey administration. Whilst this approach did introduce a modicum of variability into the data collection, this was balanced, we believed, by its success in enabling a high response rate to the survey. Further the nature of the survey was entirely exploratory with the key themes which emerged being pursued subsequently in the subsequent qualitative case studies.

Based on this exploratory survey, each national team selected two case examples per policy field (Tables II and III). The teams conducted 6 - 8 interviews for each case example, resulting in 104 interviews across the four countries and two policy areas. These were supplemented by analysis of available relevant documents and policies.

Country	Case 1	Case 2
Italy	Family counselling service	Mental health charity
Netherlands	Non-profit mental health foundation	Non-profit mental health organisation
Slovakia	Mental health charity	Psychiatric hospital
United Kingdom	Mental health charity (Regional Chapter)	Local government mental health team

Table II: Micro-cases from the policy field “mental health”.

Country	Case 1	Case 2
Italy	Community-based energy cooperative	Community-based energy cooperative
Netherlands	Community-based energy cooperative	Community-based energy cooperative
Slovakia	Municipal cooperative bioenergy provider	Municipal energy company
United Kingdom	Habitat restoration charity	University building and estate management service

Table III: micro cases from the policy field “sustainability”

Findings

Italy. In the two policy areas under analysis, institutional responsibility in the area of environmental sustainability was predominantly located at the central level, whilst responsibility for mental health services had been shifted to the regional local health authorities. Third sector organisations (TSOs) were very active in both policy areas, though with more apparent encouragement to innovate in the field of environmental sustainability. Innovations in environmental sustainability included integrated business and social models, such as the purchase of energy from a ‘responsible provider’, or redistributive action through ‘energy vouchers’ - as well as the promotion a new approach to environmental sustainability by raising the awareness and skills needed to assess the ‘life cycle of products’. In mental health they focused on either changes to organizational structures and collaboration across departments, or innovations in existing services by widening them to new clusters of patients (e.g. refugees or homeless) and/or by changing their delivery mode (e.g. inclusion of former patients in the process of cure and support) – expansionary and evolutionary innovation in the typology of innovation above.

In the area of environmental sustainability it was possible to cluster the types of risk according to the actors involved. For example, TSOs often perceived risk as ‘symbolic’ and connected to the legitimacy of a PSO. They frequently mentioned external reputational risk as a key issue. In contrast co-operatives perceived more risks in relation to regulation - primarily because renewable energy is highly regulated in Italy where government incentives determine market opportunities and market shares. It also reflected the

vicissitudes of the Italian administrative setting, characterised as a legalistic system with political instability. As one informant observed:

'It is complicated to predict the availability of sun, especially in the short run [...] but it's even harder to predict what will happen to the government and to the regulation in place!' (manager of a Community-based energy cooperative).

In the mental health sector, most respondents equated risk with clinical/professional risks and focused upon the existence of systems to identify them in PSIs. This perhaps explained the relatively high rate (76%) of respondents affirming to have systems and strategies in place to identify innovation risks– but which identified these as clinical risks alone.

'What is perhaps most risky is the possibility to commit mistakes in the diagnosis'.
(psychologist in a family counselling centre).

'I often think about the risk of suicide of the patient or without getting there even the risk of the patient of developing a psychosis'. (psychiatrist in a mental health care charity).

Moreover, monitoring and protocols were employed almost exclusively to assess clinical risk only. Given this, it was not surprising that respondents identified risk to and by patients (e.g. to service delivery staff) as the most important ones.

The second most significant risk in mental health services was identified as the results of resistance to innovation at the organizational level. (cited by 64 respondents in total). This could either be internal, by organizational staff, or external, by key stakeholders and/or the community at large. Some respondents also referred to ‘ideological resistance’, especially when the prevailing treatment paradigm was threatened by an innovation (such as a social rather than medical model of psychiatric treatment).

Finally we found ad-hoc responses to innovation-related risks were common – though, unsurprisingly, the larger the organisational size, the more structured were its risk management systems. Common informal practices included frequent meetings of organisational Boards to discuss the impact of an innovation or to anticipate changes that might impact upon the outcome of an innovation. Additionally, respondents reported relying heavily on their individual professional skills, knowledge and experience to try to mitigate these risks. A final approach to risk management entailed diversification, through the encouragement of different PSIs, in order to spread or mitigate PSI risks.

Netherlands. In neither policy field did respondents express a clear understanding of the concept of ‘risk’ and most defined it on the basis of operational practices:

‘Much was developed in practice. As a psychologist I was not very much concerned with risks, only with how everything could be developed and adapted. In the first three-quarters of the year, we gradually found out how to manage things.’
(Psychologist in a mental health institution).

In mental health services, managers identified both organisational risks (e.g. funding, buildings, professional workloads, and a lack of clear responsibilities) and human risks (especially the failure to diagnose clients correctly and privacy issues). Professionals particularly mentioned a failure to build an effective relationship with clients within PSIs, especially digital ones:

‘Patients can hide behind digital instruments. Non-verbal reactions are invisible. This is why, even with blended treatments, we use a face-to-face intake.’ (manager in health care).

‘The knowledge of software programmes is sometimes deficient. It’s necessary to read up, become experienced in using it. It’s difficult to handle. We should pay more attention to practical problems.’ (psychologist).

In environmental sustainability, institutional risks were consistently mentioned as a top priority (particularly having to deal with citizens/volunteers who lacked the necessary skills to negotiate a complex service model, or who were apathetic to and/or resisted a PSI), as well as financial vulnerability.

‘Government is very unreliable. We invest for 20-30 years, but government can’t think beyond four. For instance, there’s this subsidy that’s depleted every time, and next year there will be something different.’ (Chairman of an environmental cooperative).

‘(The cooperative) are doing well, but it’s hard for them to find members. People rarely switch between energy providers. They cannot compete on advertising, so they have to use other means. (...) Bottom-up recruitment, small steps, school activities for children, mouth-to-mouth, car-sharing.’ (Local councillor).

However, such awareness did not necessarily translate into articulated risk management tools or strategies. Both the interviews and online survey indicated the absence of formal such strategies. The dominant ‘strategy’ reported was to use ‘common sense’ or to rely on a pragmatic mind-set and professional skills in problem-solving. Insofar as formal strategies were identified, these related primarily to communication and consultation. There was an expressed belief that better communication would help to overcome apathy and resistance and that consultation could solve all problems - arguably a time-honoured Dutch approach to any problem. However, few examples of this in practice were identified by respondents.

Within the mental health field there was hence a strong culture of professionalism and a confidence that professional expertise and internal peer-review would resolve most problems. PSIs were thus handled through informal trial-and-error, with little attention to prior risk assessment, or subsequent formal evaluation. Where formal protocols had been developed at the managerial level they were barely known by professionals. Strong professional cultures appeared to militate against organisational/formalised approaches to PSI.

Whilst the environmental sustainability initiatives were primarily citizens’ organisations, compared to the larger more professionalised mental health bodies, nonetheless the

approach to risk was strikingly similar. There was again little in the way of formal risk management, though here it reflected the loose and informal nature of the organisations involved and their networks. These citizens' organisations relied on a mixture of proceeding carefully and incrementally, and maintaining an on-going dialogue on potential risks; depending on personal experience and expertise within the team, and often from highly educated board members; and careful planning and analysis. 'Common sense' and 'experience' were again cited as the most common strategies for dealing with risk in innovation.

Slovakia. The PSIs in mental health services concerned 'technical' innovations, such as new drugs or therapies. Innovations within public bodies were invariably top-down, emanating from central or local governments or national funding/regulatory bodies (e.g. insurance providers). For TSOs, the creation of the TSO itself was often the innovation (e.g. *Divadlo z pasaze* {'Passage Theatre'}, where theatre was used as a therapeutic tool). By contrast the environmental field was more differentiated. Innovations here included the use of renewable energy sources (RES), new technologies (including IT), novel ways of saving energy, strategic approaches to and analysis of the use of RES, and education on saving energy through RES.

Respondents evidenced divergence to understanding risk within both fields. In mental health services, respondents rarely made a connection between risk and innovation, possibly explained by the reported paucity of PSIs in Slovakia in general. When risks were identified they related usually to either financial risks or the physical risk from aggressive patients:

‘Anything, including innovations, resulting into the cost increase means the risk that such expenses will not be reimbursed by health insurance companies.’

(Hronovce, financial manager).

‘The issue of aggressive patients is the core problem for public mental health care hospitals. We do not have to serve only the patients from ambulatory establishments, but also criminals with ordered mental health care treatment.’

(Director, Kremnica psychiatric hospital)

Where risk management strategies existed in mental health services, they consistently took the form of top-down bureaucratic regulation. Slovakian public services are dominated by national governmental organisations with a strong public *sector* orientation. In this context, risk management followed governmental guidelines. A limited number of TSOs were involved, and they had no independence from governmental supervision in responding to risk and innovation.

In environmental services three types of risk were identified. These were procedural risk (from bureaucratic procedures and public procurement), technical risks of the use of new technologies and the instability of RES as an energy source, and environmental risk (e.g. environmental accidents and the impact of PSIs on citizens living in particular areas). Engagement with these risks was limited. In the stark words of one respondent (TSO service provider) ‘[w]e do not do any risk management in a strict sense, we do not manage risks’. Where it did occur, mostly in the public sector, it replicated the mental health model

of top down bureaucratic risk management. As one respondent (chief accountant in public sector services provider) stated ‘risk management is in the hands of mayors and particular committees within our local district council.’ Another respondent, a council leader in one of the municipalities in environmental services association affirmed that ‘if there is a problem, we get in touch immediately with the statutory representative.’ Employees at lower organisational levels were hardly involved in the governance of risk in PSIs.

UK. As in the other countries, respondents had an uncertain grasp of both risk and PSI. When asked whether they could define what innovation and risk meant for their organisations, a strong majority of respondents failed to deliver a definition for either. ‘This is not something I would think about in my daily work’, said one frontline mental health worker. Middle to senior management had received most formal training and were more overtly confident on these matters. ‘We do regular risk assessments before and during innovative projects and keep risk logs online...’ said one team leader in a statutory body, ‘...[w]e usually follow a standard project management approach around the regulatory risks.’

Such confidence was not widespread though. One programme manager stated that ‘senior management struggle with risk all the time’, finding it hard ‘to balance benefits and potential detriment’. Where they identified approaches to risk, respondents focused primarily on legal and regulatory standards that had been set by national governments or regulatory bodies, invariably from a health and safety perspective. Respondents also referenced ‘good communication’ and a ‘need to include all stakeholders’, though these appeared to be top-down bodies rather than frontline staff or service users.

Informal and bottom-up appreciations of risk dominated in both policy fields. These were not identified a risk management though, but rather as ‘common sense’. Professional sharing of techniques and strategies was thus more common than formal efforts to introduce systemic approaches to risk, even when mandated by legal and regulatory standards. These included best practices being informally shared among local and regional colleagues on an anecdotal basis, but very little effort by senior management to harness the strength of these insights in any methodical way. No evidence was found of attempts to learn from innovation failures as a positive process. This combination of a lack of understanding of risk and an informal approach to its management was perceived by many respondents as stifling PSI across both policy fields.

A second theme of the impact of funding and service contract structures was also apparent, especially in the environmental field. Many respondents reported that potentially innovative public-private partnerships were created with the remit to ‘do things differently’. However, these opportunities were rarely realized because of a over-riding focus on avoiding all forms of financial and safety risks, and without consideration of their relationship to potential benefits. A particular problem identified was the risk averse attitude of project funders. Many projects operated on a ‘minimal financial cushion’, so that convincing funders of success was seen as crucial for organisational survival. Funders were overwhelmingly characterized as highly risk averse and most interested in ‘good news stories’ related to their funding. Again no willingness to learn from innovation failures was apparent.

Finally, a strong feature of the UK experience was respondents' frustration with conflicting regulatory risk approaches for PSI. Mental health in particular was subject to multiple clinical and governmental regulatory frameworks. Health and social care integration in Scotland, for example, was described as a PSI with 'great opportunities', but where respondents identified a consistent lack of effort from the regulatory bodies to integrate multiple and oft-times competing regulatory standards for this large-scale and cross-sector PSI. Thus, grass-roots approaches to PSI were stifled by the regulatory requirements of the service – even when the innovation itself was government sanctioned (as with Scottish health and social care integration).

Cross-national comparison

	<i>Mental health</i>	<i>Environmental sustainability</i>
<i>Italy</i>	Mostly local and bottom-up. Focus on professional and employee/'common sense' approaches	Highly centralized. Focus on organizational and institutional legitimacy in a legalistic and regulatory framework
<i>Netherlands</i>	Mostly bottom-up with little formal risk management framework. Focus on maintaining organizational legitimacy using 'common sense' approaches	
<i>Slovakia</i>	Top-down regulation by government and dominance of public sector. Risk 'passed up the line' to senior managers and politicians	
<i>UK</i>	Regulation dominated by top-down risk management by regulators and funders	Bottom-up and ad-hoc approaches dominated by 'common sense'

Table IV. Cross-national comparison

The approaches of each national case study to risk are compared in Table IV. No overall pattern is apparent but four themes do recur. First, there is hardly any understanding of risk as intrinsic to innovation or of the need to weigh risks against the potential benefits of innovation. Second, there is a lack of linkage between top-down and bottom-up approaches

to risk. They exist independent of each other. The top-down approaches are driven by a complex pattern of regulatory and funder-driven frameworks. These are almost wholly risk averse – and sometimes conflictual. In contrast, the bottom-up approaches are unsystematic and ad-hoc, mostly perceived as simply ‘common sense’ rather than risk management. Finally attempts to learn from failed innovations or risks are entirely absent. Risk is perceived as something to be minimized rather than acknowledged and resolved and/or learned from.

Discussion and conclusions

Research implications. This is the first empirical exploration of approaches to risk in PSI. It has revealed that risk is a poorly understood concept, both in general and in relation to PSI. We found limited appreciation that risk was an inherent part of the innovation process or that there was a need to engage with key stakeholders in order negotiate both what was understood as a risk for any innovation and/or what levels of risk were acceptable to bear for any potential benefit from an innovation. Yet this latter approach is at the heart of the risk governance model that currently represents best practice in the field (Renn 2008). When the conceptual framework developed previously (Table V) was applied to the data, we found a predominance of technocratic and occasionally decisionistic, approaches. However no relational risk governance approaches were apparent. Relational risk governance by its nature is intensive and more expensive, as Brown & Osborne (2013) have observed, and it is not appropriate or necessary for simple innovations. However many of the PSIs examined in this study were complex ones with multiple stakeholders to be negotiated for their successful implementation. Failure to attend to this relational

dimension may well have been cheaper in the short term, but undermined fatally the likelihood of long-term sustainability for these PSIs.

The import of the findings of this study in relation to our first four research questions are also displayed in Table VI, with the fifth research question is dealt with in our final section below on policy and practice. Six implications derive from these findings. First we found three approaches to risk in public service innovation: a passive ‘non-response, a ‘top-down’ approach dominated by regulation (particularly actuarial or health and safety related), and a ‘bottom-up’ one dominated by professionals often on an ad-hoc or ‘common sense’ basis. On occasions these approaches co-existed but rarely were linkages between the approaches made extant. These approaches resonate strongly with Lodge’s (2009) previously discussed world-views of risk and innovation as respectively ‘fatalism’, ‘hierarchy’ and ‘individualism’. His fourth category, of ‘egalitarianism’ was not found, yet this resonates strongly most strongly with Renn’s ‘transparent risk governance’.

Formal responses included formal hierarchical structures that monitored and evaluated innovation processes – though these were almost wholly concerned with risk minimisation rather than risk governance. We also found formal checklists based on regulatory protocols in the mental health area (e.g. a process checklist for home visits, based on health and safety and mental health care regulations). Mature organisations might also offer formal project management training, such as Prince II or Project Management Professional qualifications. Informal ad-hoc approaches included diverse responses, such as experienced-based training on the job and informal communication, usually based upon pre-existing

professional networks. However, little evidence was found of consistent attempts to build learning loops into the innovation process that might either limit the possibility of iterative risk scenarios or learn from these for future iterative developments of PSIs (Kinder 2010).

<i>Country/ Policy Area</i>	<i>Mental Health</i>	<i>Sustainability</i>
<i>Italy</i>	<i>Technocratic risk management & evolutionary innovation</i>	<i>Technocratic risk management with decisionistic elements & mostly evolutionary innovation</i>
<i>Netherlands</i>	<i>Technocratic risk management & evolutionary innovation</i>	<i>Decisionistic risk management & expansionary innovation</i>
<i>Slovakia</i>	<i>Technocratic risk management & evolutionary innovation</i>	<i>technocratic risk management & evolutionary innovation</i>
<i>UK</i>	<i>Technocratic risk management & evolutionary innovation</i>	<i>Decisionistic risk management with small elements of negotiation & (mostly) expansionary innovation</i>

Table V: Risk approaches by national case studies

Research Question	Empirical Evidence
RQ1: <i>What is the current range of approaches to risk in public service innovation?</i>	<ul style="list-style-type: none"> • Mostly hard approaches, with occasional/informal ‘soft’ approaches to risk management. • Dominance of actuarial risk management, aiming to minimise risk altogether • Negative associations with risk – must be avoided rather than managed effectively
RQ2: <i>What are the key contingencies of PSO engagement with risk?</i>	<ul style="list-style-type: none"> • Size of an organisation • Maturity of an organisation • Level of higher-level regulation • Approach to innovation and risk of funders and funding mechanisms
RQ3: <i>What are the current approaches to engaging key stakeholders in discussions about appropriate levels of risk for public service innovation?</i>	<ul style="list-style-type: none"> • Mostly absent from cases – some evidence of informal engagement in newer organisations • No identified engagement with services users and their significant others
RQ4: <i>How are these discussions translated subsequently into specific risk management and governance models?</i>	<ul style="list-style-type: none"> • Mostly by management and policy makers through formal mechanisms of regulation and internal checklists

Table VI: Empirical Evidence by Research Question.

Second, respondents found it difficult to articulate their conceptions of risk, uncertainty and innovation. Frontline staff invariably associated these terms with managerial

responsibilities. They demonstrated an ability to implement procedural risk management, but did not see any role for themselves in negotiating either its meaning or balance against benefits. Further, risk was consistently considered as an entirely negative concept rather than a necessary component of PSI. Echoing Hood's (2002) 'blame game', risk management was thus equated with 'failure management' and often occurred only after a risk had been identified and as a 'damage control' mechanism to avoid personal or organisational blame. Risk was also invariably conflated with uncertainty and hence was seen as impossible to plan for. Finally innovation was likewise conflated with incremental change and improvement, making it hard for PSOs or their staff to identify its distinctive challenges compared to such incremental change.

Third and consequently, where it existed, risk management was invariably top-down and linked to the need to ensure compliance with regulatory regimes – and in particular when risks were seen as falling under regulatory regimes. A strong example of this was the integration of health and social care in Scotland, where respondents reported difficulties in bringing together the widely differing regulatory regimes and cultures of the health and social care organisations involved. Fourth, bottom-up approaches were identified in this study, but these were invariably informal and articulated as 'common sense' responses to 'a problem', rather than as any active engagement with risk. Nor did we identify any organisational mechanisms to support or learn from these informal approaches (Kinder 2010).

Fifth we identified funding regimes as significant drivers both of innovation and of risk management. A conflict was clear here. Funders, and contractual stipulations, often favoured PSI – but equally sought to minimise or eradicate the risk involved in such rather than to engage with it as a core element of the innovation process. This tension between innovation and reputational damage for funders has been noted also in previous research (e.g. Osborne 1998). One TSO thus reported that they were awarded funding for an innovation project in sustainability, only to find that the funding contract required them to abide by all the existing processes the funder had in place, even beyond statutory regulation, in order to comply with risk management. Their innovative idea was thus diminished to, at best, incremental change from the beginning.

Finally, we found no evidence of risk governance or negotiation based on understanding risk as a social construct, with different meanings and implications for different stakeholder groups and which required negotiation in terms of levels of risk and the associated potential benefits from an innovation. Respondents saw risk as an absolute in mostly financial terms and did not acknowledge that there was scope for discussion or even for different perceptions. Similarly, the advantage of balancing the potential benefits and risks of PSI was entirely absent. Conscious stakeholder engagement to negotiate the meaning and appropriate level of risk in relation to benefits was lacking in the other cases. Most strikingly, service users were not seen as a key stakeholder group to engage with in discussions of risk.

Policy and practice implications. This paper has important implications for public policy and service management in relation to risk and PSI (RQ 5). It has found current policy and practice to be piecemeal and lacking any pervasive understanding either of risk or of its relationship to PSI. Risk is viewed in a wholly negative fashion rather than as something to be engaged with as an inherent part of innovation. Such a failure to engage can only perpetuate a cycle of permanently failing innovation and an inability to learn for the future, as well as an enduring waste of public money down an innovation ‘drain’ (Kinder 2000).

The managerial practice evidenced here was dominated by a prevalence of technocratic and managerial responses to risk management, invariably driven by the concerns of funders or from the requirements of regulatory regimes. There was little active engagement of front-line staff in these approaches except to execute pre-determined guidelines or checklists. Where they did engage with risk it was expressed at an unconscious level and usually as a ‘common sense’ response to a service problem. No mechanisms were in place to capture and learn from these common sense responses for the future.

No active engagement with service users or their significant others was identified. Key stakeholders were identified rather as higher level bodies to be pacified as part of a ‘blame avoidance game’ (Hood 2002).. Nowhere was there any appreciation of risk governance or the idea that risk should be engaged with and weighed as part of successful innovation management. Again this is a fatal flaw that is likely to doom recurrent PSI initiatives to failure. The potential for PSOs to learn in the process is minimised in the extreme.

Moving forward, responding to these findings has major implications for the effective governance of risk in relation to PSI. At the most fundamental level this paper has revealed that public service staff have little clear understanding of the nature of risk, or of its role as an essential component of innovation. This failure is replicated in the attitudes of public service funders and regulators. This lack of understanding is undermining significant public policy initiatives that are predicated on innovation as the driver of public service reform (e.g. DIUS 2008 in the UK). The central lesson therefore is that the research community needs to articulate a meaningful discourse about the nature of risk and its relationship to innovation to drive forward more nuanced and effective public policy making and implementation. The conceptual framework developed as part of this study is a start in this process and can offer a realistic framework within which policy makers and practitioners can situate risk and PSI. We would argue for five further essential prerequisites for enabling a more effectual engagement with risk in public service innovation, based around the risk governance approach.

First, PSOs and their senior managers need to embrace a culture within public service delivery that accepts that risk is inherent to innovation. To minimise risk is to minimise innovation. Rather public service reform needs to proceed upon the basis of active engagement with the relationship between risk and innovation at all organisational levels. This includes understanding how risk relates to uncertainty, that different modes of risk exist and that it can be located in different locus with different implications (author reference, 2016). Cultural change is of course notoriously hard within any organization, and especially within PSOs because of the confluence of political and organizational

resistance (Colville et al 1993). Hard is not the same as impossible, though, and to ignore this challenge simply risks further public resources being allocated to PSI within a framework destined to ensure only minimal, if any, impact.

Second, linked to this, is the necessity to understand that innovation has real costs including the risks of failure, undesirable or unintended outcomes and/or financial costs. Failure to engage with these costs almost certainly guarantees the failure of the innovation and/or the ability to learn from such failure. PSI is complex and involves both political risks and direct risks of harm to individuals if innovations fail. This is not a reason not to engage with such risk however. In the field of public health, doctors regularly engage with substantial risk to patients in a (mostly) negotiated way in order to enhance the efficacy of medical treatment. There would be no open heart or heart replacement treatment otherwise, for example. However this is but one field where risk is acknowledge as essential to public service reform, if articulated in a largely clinical discourse (Mele et al 2014). Such articulation requires to be diffused across public service delivery as a whole if innovation is to become a successful driver of public service reform.

Third, these two recommendations require far greater engagement of all stakeholders (including services users, their significant others, local communities, politicians, and other affected PSOs, etc.) in negotiation about the types and levels of risk that are acceptable for the promised benefits of a PSI. Risk governance requires seeking agreement about levels of acceptable risk for agreed potential outcomes. Failure to engage in such negotiation almost certainly will result in opposition and resistance to an innovation and its attendant

risks – and almost certainly undermine the likelihood of successful innovation. Such negotiation is required both across stakeholder groups as well as between PSOs and these groups (Osborne & Radnor 2016).

Fourth, such a risk governance approach does not deny the need for adequate risk assessment for any innovation. Indeed this is essential to drive forward meaningful risk negotiation. However the balance between risk assessment and governance will change between different types of innovation. Technocratic and managerial risk approaches, as identified by Renn, will still suffice for some simple forms of innovation. To impose negotiated risk governance on all would be time consuming, costly and un-necessary. Thus a pendant alarm for older people will require technical assessment of its efficacy but is likely to engender little need to extensive stakeholder engagement. However the introduction of smart homes for older people as part of a community care initiative would require far greater risk negotiation and governance.

Fifth, PSOs need to attend to learning within their risk governance strategies. This incorporates both learning *how* to engage with risk in public service delivery and learning *from* risky encounters and/or innovation failures (Aulton 2016). Conceptualising risk as something to be minimised or avoided undermines the ability of PSOs to engage with risk and learn from it. The risks that PSOs face in PSI can often include direct risk of personal harm or danger to service users, as well as damaging and negative media attention directed at individual professionals or PSOs. This is not a reason to avoid it however, but rather to acknowledge its complexity – and its necessity for effective public service reform.

Whether public services can evolve beyond Hood's 'blame game' is a political question though, rather than a managerial one. Consequently such change is not required from and within PSOs alone. It is required from politicians and public policy makers, as well as from the major funding regimes. Indeed the evidence above suggests that changes at this level are likely to drive top-down change in approaches to risk within PSOs. This does not negate the potential of bottom-up change, but will enable an environment that is conducive to such bottom-up approaches.

This is an extremely challenging agenda for political, policy-making, and cultural change across public policy making, PSOs and public services delivery. It is not an agenda that will be easy, or even cheap, to achieve. However our evidence is that innovation as a route to public service reform is currently being undermined by ineffective, or non-existent, approaches to engaging with the risks of public service innovation. Not only is this an immense waste of the substantial public resources being devoted to such PSI, it is also an expensive route to the failure of the reform of public services that is required in order to address societal needs in an effective and efficient manner.

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